each of the four resulting strata, and the remaining sample size was allocated to strata in proportion to the "size" of each stratum. Stratum size was defined as the square root of the aggregate R&D expenditures in S&E of the institutions in the stratum. Academically administered Federally Funded Research and Development Centers were excluded from this survey. Within strata, institutions were sampled with probability proportionate to size. Again, size was defined as the square root of the institution's fiscal year 1983 R&D expenditures.

Following the selection of an initial sample of 253 institutions, NSF determined that several of the sampled institutions were out of the scope of the survey. Out-of-scope institutions included those in outlying territories, military academies, and three highly specialized institutions considered inappropriate, given the nature of their programs. Elimination of these out-of-scope cases reduced the final sample to 247 institutions, of which 29 were HBCUs and 99 had (or were) medical schools.

Institutions in the sample accounted for more than 75 percent of all academic R&D expenditures in fiscal year 1983 and encompassed at least 70 percent of the spending in each major S&E discipline. The sample represented a weighted national total of 525 institutions. The composition of this survey universe, by type of institution, is shown in Table A-1.

Table A-1. Number of institutions in the survey universe of researchperforming universities and colleges: weighted estimates, 1988

| Institution type | Total | Non-HBCUs ¹ | | HBCUs1 |
|----------------------------------|-------|------------------------|---------|--------|
| | | Public | Private | |
| Total | 525 | 296 | 200 | 29 |
| Doctorate-granting | 293 | 190 | 100 | 3 |
| Top 100 in research expenditures | 100 | 69 | 31 | 0 |
| Other | 193 | 121 | 69 | 3 |
| Nondoctorate-granting | 232 | 106 | 100 | 26 |

¹ HBCU refers to Historically Black Colleges and Universities.

SOURCE: National Science Foundation/SRS, 1988 Survey of Scientific and Engineering Research Facilities at